“Silverback”

To become an IA, you must become a true leader

By Bill O’Brien

As an FAA airworthiness inspector, I still must perform enroute inspections. So the other day, I found myself lashed to the jump seat of a fully loaded MD-80. Sitting there, wedged between the bulkheads, I was pondering the prospect of a three-hour ride back to DCA, when Mr. Murphy struck.

The captain could not get the APU to turn over. The crew ran down the APU troubleshooting checklist, pressed all the buttons, exercised all the circuit breakers and prayed to the APU god, but it still didn’t start, so the co-pilot called maintenance. In five minutes or so, a technician came over and started to troubleshoot the problem.

While the technician was back in the tail looking at the APU, a ramp agent ran down the jet way and asked one of the flight attendants standing by the left main entry door how long would it take the “grease monkey” to fix the problem, because we were blocking the gate and another plane was waiting.

Sitting there, overhearing that same old put-down, I felt the Irish boil up from my belly and turn my cheeks red. Just as quickly I let it pass. This was not the time and not the place to make a ramp agent a little wiser about our profession, I rationalized. Too many witnesses.

I knew the technician would understand. He, like many of us, just tries to make our little corner of aviation a little safer each day. And a couple of harsh words about us won’t change the way we think of ourselves and our profession. But still, despite our profession’s coverup, the lack of respect from one’s peers always hurts a bit.

But among us there is one member of our aviation maintenance profession that very rarely gets beat up. General aviation A&P technicians know this individual as an IA. The rest of the GA industry knows the IA as a “Silverback,” the 800-pound gorilla of general aviation maintenance. “Silverbacks” are not to be trifled with. IAs can ground airplanes, approve data, perform annuals, and approve for return to service major repairs and major alterations. They are a walking, talking, two-legged repair station.

IA requirements

To become a Silverback you must first meet all the regulatory requirements in Part 65. But before I go over the FAR for IA, may I offer you potential Silverbacks a bit of advice? Before you earn the right to exercise the awesome power that an IA wields, you must first, have a total commitment and accountability to aviation safety.

This total commitment is shown in the way you prepare for the IA test. Your preparation should be long and thorough. A couple of hours each night for three months, should be spent studying the FAR, Advisory Circulars, ADs, type certificates, and running practice annual inspection logbook reviews on different aircraft.

You read right, at least three months. And this individual self-study doesn’t stop when you pass the test. It should remain a continuing, repetitive educational process, for each year, and every year that you hold the IA.

Regrettably, there is no fast, or inexpensive way to become an IA. I do not recommend the “quickie” IA weekend schools or “guaranteed to pass the first time” IA courses that are routinely advertized in trade magazines. These educational fast food establishments might give you enough sustenance to pass the test, but you will be starving for more information later on.

Without additional study and preparation on your part, you will remain forever, an undernourished 50-pound gorilla, woefully unprepared to discharge your duty as an IA and unfit to hold the title of Silverback.

The second virtue you must possess is accountability. Once an IA signs an annual off in a log-book, or approves an FAA Form 337, that IA has assumed responsibility and accountability for his or her actions. This accountability is not transferable nor can it be delegated to someone else. Right or wrong, if there is an accident or a problem with the work you have approved, then it is the IA that is the first one the FAA or NTSB investigator interviews. If you find this accountability concept difficult to swallow, then maybe, becoming a Silverback is not for you.

Getting ready

First pick up a copy of Advisory Circular 65-19F, Inspection Authorization Study Guide. Your local FSDO should have a couple.

Go to Appendix 2 of the AC and check and see if you already have all the publications that you should have with you when you take the test. If you are missing some publications, get them. Take my word for it, at least one question will come from each of those referenced publications.

Some of the publications, like ADs, are expensive to buy. You are not required to own your own personal AD listing. FAR 65.91 (4) says that the IA should have the inspection data "available" to him. So if you work for an airline or a repair station and you have your company's permission to use the data, then it is OK with the FAA.

However, it would be a good idea to get that OK in writing just in case the FAA inspector gets a little suspicious if you walk in for the IA test with a company's logo all over the tech data.

The requirements:

There are just four rules in Part 65 that directly addresses IAs.

The first rule: 65.91 Inspection Authorization sets the eligibility requirements for the IA. The first requirement is that the IA applicant must hold a current A&P technician certificate for a total of three years.

During those three years the applicant must have been actively engaged (working) for a two-year period maintaining civil aircraft. The applicant must have a fixed base of operation where he or she can be reached by telephone during a normal work week. The applicant must have the necessary equipment, facilities, and inspection data available to properly inspect aircraft and their related parts. And last, the applicant must pass a difficult written test.

Although the rule does not actually state it, the minimum age for an IA is 21. This is based on the fact that FAR 65.71 requires that a technician must be at least 18 years of age before the A&P technician certificate can be issued. So if you must be 18 years old to be an A&P, and you need at least three years' experience to be eligible to be an IA, it doesn't take a degree in quantum physics to figure out that an applicant must be at least 21 years of age to order to take the IA test.

The second rule, FAR 65.92 talks about the duration of the IA. Since the IA is an authorization, not a rating or a certificate, it is life limited. Every IA authorization expires on March 31 of every year. The IA can also be suspended by the local FAA office if the IA no longer has the inspection data available, or if the local sheriff confiscates the IA's equipment or padlocks his facilities so he can no longer perform the functions of an IA.

The FAA can also suspend or revoke the IA if they found that the IA was improperly performing the duties of an IA. And if for any reason one or both of the IA's airframe or powerplant rating is surrendered, suspended, or revoked by the FAA, the Inspection Authorization is no longer in effect.

The third rule, FAR 65.93 talks about IA renewal. There are five ways to renew the IA:

1. The IA must perform at least one annual inspection for each 90 days the applicant held the IA. No, this does not mean that an IA must perform at least one annual for each three-month quarter (every 90 days). It means that if you were an IA for a year, you need four annuals to meet the renewal requirements. All four annuals could have been performed in the last two weeks of the last

quarter before you applied to renewal. Another way to explain this requirement is if you were only an IA for six months (180 days), then you need just two annuals to renew, or you could:
2. Sign off two major repairs or two major alterations for each 90 days you were an IA. So if you were an IA for a year, you must show that you signed off eight FAA Form 337s. Or if you were only an IA for six months, you could be renewed if you only had four Form 337s signed off. You can't mix annuals and Form 337 such as performing three annuals and two Form 337s and expect to get renewed; however, you are allowed to mix up major repairs and major alterations any way you want and still get renewed, or:
3. The IA must have performed or supervised and approved at least one progressive inspection during the past year. That means the whole inspection, if the progressive has five phases and the IA only finished three phases because the first inspection started in August, then the progressive inspection was not completed. Therefore it cannot count for renewal of the IA, or you could:
4. Attend and successfully complete an eight-hour refresher course acceptable to the FAA. This is quickly becoming one of the more popular forms of IA renewal, because of the decline of GA activity.
Or you could:
5. Pass an oral test given by an FAA inspector. For some unknown reason this form of IA renewal is rarely exercised by the 13,000 plus IAs that renew each year.
The fourth rule, FAR 65.95 Privileges and Limitations. This rule declares that an IA can perform annual inspections, perform or supervise a progressive inspection, and approve for return to service major alterations and major repairs on Part 91 and Part 135, nine or fewer aircraft.
This same rule allows an IA to change his fixed base of operation from one airport to another, from one flight standards district office to another. This allows an IA enormous flexibility and freedom to earn a living; however, the IA cannot perform the functions of an IA until he or she has notified by letter the district office who is responsible for that geographic location he or she has moved to.

The IA test
Ask any Silverback if they would rather sit on hard, straight back chair for 24 hours, listening to me for 24 hours straight with no potty breaks or take the IA test over again. They would take the 24-hour option.
This is one tough test. It takes a minimum of five hours but usually runs seven. The test is designed to determine the ability of the applicant to accurately use the proper technical data while inspecting an aircraft; this also includes approving a major repair or major alteration.
The test is given at the local FSDO by an FAA airworthiness inspector who never smiles. You must arrive on time on the appointed day. You must supply all your own technical data and FAA publications. The publications and data can be on microfiche or paper, but there cannot be any margin notes or "ponies." I recommend that you take a hand-held nonprogrammable calculator so you can work out the inevitable weight and balance problem.
The test is divided into two parts. Part I consists of 10 multiple questions based on the privileges, limitations, and basic functions of an IA. This is a closed-book test, which means you must have pretty well memorized the four Part 65 IA rules by heart.
Most unprepared IA applicants figure a multi-answer test is another federal giveaway program until they read the directions and find out that the FAA allows two hours to take the test. When you finish Part I, the FAA inspector grades it right there in front of you. If you pass, you go on to take Part II. If you fail Part I, the FAA inspector is not allowed to tell you what questions you failed, only how many. The inspector will then hand you an FAA Form 8060-5 Notice of Disapproval of Application and tell you that you will have to wait 90 days to take the test again.
Part II has a time limit of four hours. The FAA inspector assigns you an airplane. Pray that it is not a Beech 18! Then you have to answer the 20 test questions as they relate to your assigned

airplane, such as, list all the applicable ADs, or work a weight and balance problem, or fill out a major repair or alteration, make a logbook entry, or explain the type certificate requirements for the aircraft, engine, and propeller. Part II also throws in some questions on the FARs, and AC 43.13-1A and 2A just to make life interesting.

Since this is a timed test, completed or not, you are finished in four hours. I have seen many a good technician fail Part II because they were not fast enough. They spent two much time searching for the information, instead of knowing where it was. Speed is the payoff for spending a couple of hours a night with the books for three months. Speed and accuracy sorting through the ADs, rules, and type certificate paper or fiche is a skill that is honed over a long period of time. It is not a skill picked up from a three-day weekend course.

Like Part I, Part II is graded right in front of you. If you fail, you are told how may questions you failed and regrettably you are given the 8060-5 and reminded of the 90-day waiting period . If you pass, and you need a 70 percent on each test to pass, the FAA inspector will go over each question on each test you failed to ensure you know the right answer when you walk under your own steam or are helped out the FSDO front door.

The FAA inspector lets you alone while he fills out block 14 of your FAA Form 8610-1 Mechanic's Application for Inspection Authorization and types up your FAA Form 8310-5 IA card, dates it and signs it. And along with a smile, a handshake, and some final words of advice, the inspector presents you a reminder of your hard work, a little 3 1/2" x 2 1/2" buff-colored IA card.

In the FSDO parking lot, you steal another look at the card. It's not very impressive as federal documents go, but boy are you happy to see your name on it.

Carefully you slide the card back in your wallet, and whistling an old country and western tune, you stroll toward your car. Just before you unlock your car door, you become aware of a new and strange sensation. It is hard to explain, but you feel that your upper back and shoulders are beginning to itch, and even stranger, you feel as if you are getting heavier.